Detecting covered current paths in highly integrated circuits - using magneto=optical film and device to produce contrast image

Numéro du brevet:	DE4021359
Date de publication:	1992-01-09
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Classification:	
- internationale	G01R19/08; G01R33/032; G01V3/08; H01L21/66
- européenne	G01R31/315; G01R33/10; G01R33/032C
Numéro de demande	DE19904021359 19900705
Numéro(s) de priorité:	DE19904021359 19900705

Abrégé pour **DE4021359**

The method of detecting covered current paths in a body (2) which are insulated w.r.t. a free surface (2a) involves detecting a magnetic field of known strength at the surface caused by currents flowing in the conducting paths. The free surface is covered by a thin film (5) of magnetooptical material with magnetic anisotropy with a defined orientation of the easy magnetisation direction. The magnetisation normal to the surface depends essentially linearly on the field. The instantaneous magnetisation state in the film influences the magnetooptical rotation angle to appear as a contrast image (15) in a magnetooptical device (14).
USE/ADVANTAGE - E.g. for fault detection in highly integrated circuits. For convenient location and testing of concealed current paths without ingress.